

Application No. 10/004,061  
 Amendment dated December 28, 2004  
 Reply to Office Action of September 24, 2004

### REMARKS / ARGUMENTS

Applicant thanks the Examiner for the Office Action of September 21, 2004. This Amendment is in full response thereto. Claims 1-11, 16-19, 24-25, 30-31, 36-37, 42-43, 48-49, 54-55, 60-66, and 68-70 have been cancelled. Claims 13-15, 20-23, 26-29, 32-35, 38-41, 44-47, 50-53, 56-59, and 67 have been amended. Claims 12, 72-76 remain in their originally presented form.

With respect to the final restriction requirement, Applicant has cancelled claims 62-66.

With respect to the rejection of claims 67-76 under 35 USC 112(2), Applicant has amended claim 67 to include the steps inadvertently placed in claims 68-71 and cancelled claims 68-71. Thus, Applicant believes the rejection is mooted and respectfully requests withdrawal of the same.

With respect to the rejection of claims 1-11, 16-19, 24-25, 30-31, 36-37, 42-43, 48-49, 54-55, and 60-61 under 35 USC 102(a) over Schulte and Ji et al., these claims have been cancelled and therefore Applicant believes the rejection is mooted and respectfully requests withdrawal of the same.

With respect to the rejection of claims 13-15, 20-23, 26-29, 32-35, 38-41, 44-47, 50-53, 56-59 under 35 USC 102(b) over Schulte and Ji et al., Applicant has limited the claims to exclude helium, nitrogen, hydrogen, and carbon dioxide. As such, both references fail to disclose, teach or suggest the various light or heavy gases recited in these claims.

With respect to the rejection of claims 67 and 72-76 under 35 USC 102(b) over Schulte and Ji et al., these references fail to disclose, teach or suggest ascertaining a heating or cooling demand and combining the at least one light gas

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and the at least one heavy gas or fluid based on the demand. As such, Applicant respectfully requests that the rejection be withdrawn.

With respect to the rejection of claims 1, 12 and 14 under 35 USC 102(b) over Short et al., the rejection should be withdrawn because Short et al. fails to teach both a light gas and a heavy gas. While Applicant notes that some of the various refrigerants recited in the abstract and specification are gases, he respectfully points out that the lubricant in the disclosed composition is believed to always be described as a liquid and never disclosed as a gas.

Further evidence that the lubricant is a liquid is the repeated recitation regarding miscibility in the refrigerant. Additionally, the patent fails to disclose a single example of the lubricant in a gaseous form.

A patent is not anticipatory if it very broadly recites a chemical compound, some obscure permutations of which may hypothetically touch upon a specifically required claim limitation, but fails to disclose even one embodiment including the specifically required claimed limitation.

As such, Applicant respectfully requests withdrawal of the rejections. Otherwise, Applicant kindly asks the Examiner to provide persuasive technical explanation as to why Short et al. discloses a lubricant gas.

With respect to the rejection of claims 1-76 over U.S. 6,651,358 B2 and U.S. 6,574,972 B2 under the nonstatutory doctrine of double patenting, Applicant has either cancelled or amended claims to include subject matter which is not disclosed by the subject patents and therefore could not have been presented and claimed by the same. Thus, Applicant believes the rejection is mooted and respectfully requests withdrawal of the same.

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**CONCLUSION**

In conclusion and for the reasons detailed above, Applicant respectfully asserts that the application is in condition for allowance. Applicant earnestly solicits early allowance of the same.

Should the Examiner believe that a telephone call would expedite prosecution of the application, he is invited to call the undersigned attorney at the number listed below. A petition for a one month extension of time is being contemporaneously submitted with this amendment. Otherwise, it is believed that no fee is due at this time. If that belief is incorrect, please debit deposit account number 01-1375. Also, the Commissioner is authorized to credit any overpayment to deposit account number 01-1375.

Respectfully submitted,

  
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**CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8(a)**

I hereby certify that this correspondence is being transmitted via facsimile to telephone number 703-872-9306 on this 28th day of December, 2004.

  
Christopher J. Cronin  
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